[Document] Specification

[Title of the invention]

Non-Charging Resin Composite and Method for Manufacturing the Same

[Claims]

[Claim 1] A resin composite material in which a component containing a metal element is present at the surface of a resin base, which is obtained by using a resin base treated with ion exchange group introduction agent, and treating its surface with a liquid containing metal ions to introduce metal ions, and then converting said metal ions, said non-charging resin composite material being characterized in that the ratio of the surface resistance of said resin composite material to the resistivity of said component containing metal element is 10^{12} to 10^{17} (1/□·cm).

[Claim 2] The non-charging resin composite material according to Claim 1, wherein the surface resistance of the resin composite material is 10^6-10^{11} Ω/□.

[Claim 3] The non-charging resin composite material according to Claim 1 or 2, wherein the component containing metal element is selected from a group comprising metals, metal arsenides, metal antimonides, metal selenides, metal tellurides, metal sulfides and metal oxides.

[Claim 4] The non-charging resin composite material according to any of Claims 1-3, wherein the metal element is a metal element selected from V, Cr, Mn, Fe, Co, Ni, Cu, Ga, As, Se, Mo, Ru, Rh, Pd, Ag, Cd, In, Sb, Te, Os, Ir, Pt, Au, Hg, Pb, Bi and mixtures thereof.

[Claim 5] The non-charging resin composite material according to any of Claims 1-4, wherein the resin is a resin selected from a group comprising epoxy resin, polyimide resin, vinyl resin, phenol resin, nylon resin, polyphenylene ether resin, polypropylene resin, fluorine-based resin, ABS resin and mixtures thereof.

[Claim 6] A method for manufacturing the non-charging resin composite material according to any of Claims 1-5, which comprises (1) a process wherein resin base is treated with ion exchange group introduction agent, (2) a process wherein treatment is carried out with a liquid containing metal ions, and (3) a process wherein component